

## **REMARKS**

Applicant, his principal representatives in Germany, and the undersigned have carefully reviewed the second, non-final Office Action of May 4, 2009 in the subject U.S. patent application, together with the prior art cited and relied on in the rejections of the claims. In response, the Substitute Specification, drawings and claims have been amended. It is believed that the claims which are now pending in the subject US patent application are patentable over the cited prior art relied on in their rejection. Reexamination and reconsideration of the application, and allowance of the claims, is respectfully requested.

The subject invention is directed to, and claims a printing press that is usable to imprint a web of material. In this printing press, there are provided a forme cylinder, a transfer cylinder and typically a counter-pressure cylinder, which may be another transfer cylinder. The forme cylinder has a plurality of printing plates extending axially across the length of the forme cylinder. This plurality of printing plates are usable to print a number N of pages. The number N is a natural number and is evenly divisible by 3. In other words, the number N could be 3, 6, 9 etc. This number of pages that are to be printed, have a combined page width that is less than the forme cylinder width. In other words, there is a portion of the forme cylinder width which is not used to print the N number of pages. However, if the N number of pages were increased by one; i.e. were 4, 7, 10 or the like, the combined page width would be greater than the width of the forme cylinder. In the case of N being three pages, the combined page width is greater than  $\frac{3}{4}$  of the forme cylinder width.

In prior press configurations, as is discussed at paragraphs 003-005 of the substitute specification, at least one quarter of the production capacity of the printing press has been unused when the combined page width was less than the forme cylinder width. This was due to the arrangement of longitudinal web cutting devices and formers in the prior art. The result was that a substantial production capacity of these prior presses was lost. In the situation of a job press or a semi-commercial press which often was used to print page formats with widths that were less than the overall advisable width of the forme cylinder, as discussed at paragraph 005 of the substitute specification, the entire width of the forme cylinder was apt to be underutilized. However, in this prior art unfavorable format, a print of twice the number of pages to be printed would exceed the width of the forme cylinder. This again has, in the past, resulted in the underutilization of the printing press.

In the present invention, as may be seen in Fig. 2, there is provided a printing press that has the above discussed N number of pages in width. That number N is, as was also discussed above, a natural number which is evenly divisible by 3. That number N must be at least 3 and can be 6, 9, 12 or the like. In accordance with the present invention, as recited in currently amended claims 22 and 46, the axial width of the forme cylinder is such that if the number of pages N were to be increased by one additional page width, the resultant web width of  $N + 1$  pages would exceed the width of the forme cylinder. Thus even when a web of only three pages in width is being printed, that web is utilizing more than  $\frac{3}{4}$  of the effective width of the forme cylinder. This allows the printing press, in accordance with the present invention, to be more efficient.

In the subject invention, as depicted in Fig. 2, and as recited in currently amended claims 22 and 46, there is provided at least one longitudinal web cutting device, generally at 17. It is used to cut the printed web into at least two sections or partial webs. As recited in the claims, the at least one web cutting device is placed at a boundary between a one third web width and a two third web width.

Once the web has been cut into the two partial web widths, with one of them having a width of two thirds of the total page width, the webs are directed to two turning bars where they are directed to a former. As is also depicted in Fig. 2, the entry area of that former is generally at 90° or is transverse to the initial web running direction through the printing press. The two turning bars include the one which has an effective width that is at least two-thirds of the maximum web width. The two partial webs are then directed to the longitudinal fold former in a superimposed arrangement. As may also be seen in Fig. 2, the two-thirds width web can be folded horizontally by the former. The one third width web may pass along one side of the former and will not be longitudinally formed and folded. The two combined partial webs can then be transversely cut and can then be longitudinally folded a second time to provide a finished product with a desired page orientation.

In the second, non-final Office Action of May 4, 2009, Examiner Yan, who has now been assigned the subject application, indicated that applicant's remarks, as submitted in the Amendment of January 8, 2009, had been considered but were moot in view of the new grounds of rejection. It is believed that the arguments were valid and that their presentation in the January 8, 2009 Amendment were at least in part

responsible for the additional searching and the issuance of the second Office Action, the non-finality of which is noted and appreciated.

It was asserted that Fig. 1 of the drawings should be identified as –PRIOR ART—based on the applicant's remarks in the specification. While that has been done, to some extent in the interests of advancing the prosecution of the application, the portion of Fig. 1 which the applicant intended to identify as prior art, is the printing press depicted at the top left portion of Fig. 1, not the entire arrangement depicted in Fig. 1.

In support of this contention, the Examiner is requested to view several paragraphs of the substitute specification, and, if desired, the concurrently submitted verified translation. While paragraphs 016 and 017 do recite that there is depicted and described portions of a generally known printing press, that discussion is believed to be directed only to the press. The discussion at paragraph 018 of the substitute specification is not identified as prior art. Nor is the discussion of the longitudinal cutting device 07, the spur needle and folding blade cylinder 08 or the second transverse cutter 13.

In support of that assertion, the Examiner is asked to review the discussion of paragraphs 003 and 005 of the substitute specification. This is believed to be a more accurate discussion of what is perceived, by the inventor, as prior art. Specifically, in paragraph 004 there is set forth a discussion of the inefficiency that has resulted when the number of pages to be produced is not sufficient to fill four pages side-by-side. In that situation, the plate cylinder can be provided with a reduced number of printing plates. This will equip it to print a reduced width web. However, at least a quarter of the width of the plate cylinder will not be utilized. The discussion at paragraph 005 follows

the theme of the prior paragraph and discusses the limitations or inefficiencies that result in the use of such a prior art press in semi-commercial or jobber printing. Again, all of the discussion is directed to the printing press by itself, not to the combination of printing presses, turning bar, web splitter, folding blade cylinder, second transverse cutter and longitudinal folding device shown in Fig. 1. While Fig. 1 has now been labeled as PRIOR ART in accordance with the Examiner's request, such labeling is not to be considered as an admission that anything other than the actual printing press, by itself, is known in the art.

In the review of the substitute specification, in the course of preparing this response, several additional instances of somewhat vague language were noted in paragraphs 003, 004 and 005. These have been corrected in a manner which is believed not to add any new matter. Their entry is respectfully requested.

Claims 22, 23 and 46 were rejected under 35 USC 103(a) as being unpatentable over US Patent No 1,709,386 to Zuckerman in view of what was asserted to be applicant's admitted prior art or (AAPA). It was asserted that Zuckerman shows a printing press adapted to print a web and including a forme cylinder with 6 pages in width. It was further asserted that the six page width was less than the forme cylinder width and that seven pages would have a width greater than the forme cylinder width. Zuckerman was further cited as having at least one longitudinal web cutting device that is usable to divide the web into  $\frac{1}{3}$  and a  $\frac{2}{3}$  web width segment. It was also asserted that Zuckerman shows a former and that at least one of the partial webs is conducted through that former.

It was admitted that Zuckerman does not show a former entry area extending transverse to the web running direction. It was the asserted AAPA that was relied on to provide the teachings of extending of a former entry area transversely of the web running direction. For the reasons to now be set forth in detail, it is believed that Zuckerman taken either by itself or in combination even with the Examiner's asserted AAPA does not render obvious the subject invention, as recited in either of currently amended claims 22 and 46.

In the patent to Zuckerman, there is shown a printing press that includes several printing couples, such as couples 2 and 3. As discussed at page 1, lines 90-100, these printing couples are intended to print a web of twelve pages in width. After the web has been printed, it is slit by five spaced longitudinal slitter 4 into six partial webs, all of which has the same web width of  $1/6$  of the initial web width. This is clearly shown in Fig. 2. Pairs of turning bars 8; 8', acting as double turning bars, are placed in the path of each alternative one of the partial webs. These double turning bars 8; 8' shift alternating ones of the partial webs transversely to the direction of web travel and superimpose the so shifted partial webs into a travel path coincident with that of the adjacent, non-shifted partial web. Each of these now double thick partial webs is fed to a separate one of three formers 9, 10 or 11. These three formers then longitudinally form their partial webs and feed them to separate areas of a transverse folding arrangement, as depicted in Fig. 3. Separate streams of product exit these segments of the transverse folding arrangement.

In Fig. 4, the initial web W is slit into three partial webs f, g and h. These three partial webs do not go through any turning bar pairs. They still go to three separate

formers 37, 38 and 39. The resultant three longitudinally folded partial webs are again fed to three separate areas of a transverse folding arrangement, as depicted in Fig. 3. The result again is that "...twelve different signatures of eight pages each and having a closed top head will be produced." This is set forth at the top of page 3 of the Zuckerman reference.

There is no teaching or support in the Zuckerman reference for the Examiner's assertion that the number N of pages; i.e. six such pages has a width less than that of the forme cylinder width. In the view of Fig. 2, the web W clearly has a width that is the same as that of the cylinders, which are not specifically numbered in Fig. 2. While a web width of N plus one page may well be greater than the forme cylinder width, there is no teaching or suggestion that the web width W is less than the forme cylinder width.

In each of the various figures of the Zuckerman reference, the web W is cut into a plurality of partial webs, all of which has the same widths. The Examiner's attention is directed to Figs. 2, 4 and 6. There is no teaching, or suggestion in Zuckerman of the division of the web into a one-third partial web and a two-third partial web. Further in Zuckerman, there are provided at least three separate longitudinal fold formers. Each of these fold formers receives only a portion of the total web. Each typically receives one-third of the total web width. There is thus no showing in Zuckerman of the placement of the longitudinal cutting device at a location which results in a one-third width web and a two-third width web. In all of the depictions of the Zuckerman reference, the former entry area is aligned with the web running direction, not at 90° to it.

In the Office Action, it was asserted that the combination of Zuckerman with what was alleged to be AAPA would render the claims unpatentable. It is the position of the undersigned that, as discussed above, what is asserted as AAPA is, in fact, not. It is further believed that even if all of Fig. 1 of the subject application were held to be AAPA, it does not show or suggest the structure of the subject invention, as set forth in currently amended claims 22 and 46. Fig. 1 of the subject invention does not show or suggest the division of a web into a one-third width and a two-third width. It does not show two turning bars with one having an effective width usable to handle the two-thirds web width partial web. The single turning bar in Fig. 1 of the subject application, again assuming that it could be held to be AAPA, is used to turn the entire web through 90°. The web is then formed longitudinally and only then is it cut, also longitudinally. Even if one were to combine the Zuckerman reference and the asserted AAPA of Fig. 1 of the subject application, the result would not render obvious the printing press as recited in currently amended claims 22 and 46.

Claims 22 and 46 have both been amended in a similar manner. The arguments set forth with respect to claim 22 are equally applicable to currently amended claim 46. Dependent claim 23 has been carried forward. Several of the previously withdrawn claims have been amended to conform their claim language to that of currently amended claim 22. Several other ones of the withdrawn claims have now been cancelled. It is believed that the withdrawn claims that are now pending in the subject application can be rejoined upon the indication of the allowability of currently amended claim 22.



## SUMMARY

Several of the paragraphs of the Substitute Specification have been amended, without the addition of new matter. Fig. 1 of the drawings has been cancelled and replaced with a replacement Fig. 1. Claims 22 and 46, the two independent claims now pending in the subject application, have been amended. It is believed that the claims which are now pending in the subject application are patentable over the prior art cited and relied on. Allowance of the claims, and passage of the application to issue is respectfully requested.

Respectfully submitted,

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